

**PATENT****REMARKS**

In the Office Action, the Examiner rejected claims 1, 6-8, 13-19 and 21-25 under 35 U.S.C. §102; and rejected claims 2-5, 9-12 and 20 under 35 U.S.C. §103(a). These rejections are fully traversed below.

Claims 1-25 remain pending. Reconsideration of the application is respectfully requested.

**REJECTION OF CLAIMS 1 AND 6-8 UNDER 35 USC 102(b)**

On pages 1-2 of the Office Action, the Examiner rejected claims 1 and 6-8 under 35 USC 102(b) as being anticipated by Johnson et al., U.S. Patent No. 6,279,946. Applicants respectfully disagree.

Claim 1 pertains to a personal wireless communication device that, among other things, includes a microphone for sound pickup and a directional speaker for sound output.

In contrast, Johnson et al. pertains to "[m]ethods for controlling a system in a vehicle in which radiation is directed from a transducer into the passenger compartment and is reflected off or modified by an object in the passenger compartment and received by the same or a different transducer." Such methods are for use in a vehicle and have no use for personal wireless communication devices. The Examiner references col. 29, line 19 because Johnson et al. therein makes mention of a "cellular phone". However, the cellular phone mentioned at col. 29, line 19 is referring to an in-vehicle phone system 359. See Johnson et al., col. 29, lines 41-43. While the vehicle can use directional speakers as noted at col. 29, lines 33-35 of Johnson et al., the directional speakers are again part of the vehicle and have nothing to do with a personal wireless communication device.

**PATENT**

On page 15 of the final Office Action, the Examiner suggests that "the directional speakers of Johnson et al, are part of the cellular phone system as well as the directional microphone even though they are not explicitly disclosed as a physically integral part of a cellular phone handset." As support the Examiner relies on col. 29, lines 33-35 of Johnson et al. Applicants respectfully disagree and submit that there is no support in the art of record for the Examiner's statement regarding Johnson et al.

Johnson et al. describes "in-vehicle" techniques that uses ultrasonic waves to determine whether a passenger is seated in a passenger compartment of the vehicle. At, col. 29, 19-43 and Fig. 10 of Johnson et al. a driver of the vehicle can use a cellular phone system 359 provided in the vehicle. Ultrasonic transducers 231, 232 and 233 can be used to locate the driver's head. After the user's head has been located, a directional microphone 355 can be directed at the driver's head. The phone system 359 and the speaker 357 are fixtures of the vehicle. Additionally, Johnson et al. speculates that "[t]he use of directional speakers or even a hypersonic sound system in a similar manner also improves the telephone system performance."

Initially, as noted above, the cellular phone comments in Johnson et al. pertain to a cellular phone system 359 that is "in-vehicle". The speaker 357 is also "in-vehicle". The vehicle in Johnson et al. is not a portable wireless communication device, such as a hand-held communication device (e.g., mobile phone). Moreover, nothing in Johnson et al. teaches or suggests that its methods and systems are suitable for use in a personal, portable wireless communication device. Typically, a personal, portable wireless communication device has no compartment area and no need to locate a passenger's head position. A user of such personal, portable wireless communication device, like a mobile phone, simply holds the mobile phone proximate to their head to talk into the microphone.

**PATENT**

Consequently, it is submitted that Johnson et al. fails to teach or suggest claim 1. Claim 6-8 depend from claim 1 and are, therefore, patentably distinct from Johnson et al. for at least the same reasons.

**REJECTION OF CLAIMS 2-5, AND 9-12 UNDER 35 USC 103(a)**

On pages 4-8 of the Office Action, the Examiner rejected claim 2 under 35 USC 103(a) as being unpatentable over Johnson et al.; rejected claims 3-5 under 35 USC 103(a) as being unpatentable over Johnson et al. in view of Meyer et al. (U.S. Pat. No. 5,588,041); rejected claim 9 under 35 USC 103(a) as being unpatentable over Johnson et al. in view of Norris (U.S. Pat. No. 6,151,398); and rejected claims 10-12 under 35 USC 103(a) as being unpatentable over Johnson et al. in view of American Technology Corporation Technology Licensing Webpage (hereafter "American Technology Corp."). Applicants respectfully disagree.

Claim 2 pertains to a personal wireless communication device that, among other things, includes a directional speaker for sound output as noted in claim 1, as well as a standard, non-directional speaker for sound output. Johnson et al. has at least the deficiencies noted above with respect to claim 1. Additionally, nothing in Johnson et al. would motivate the inclusion of a directional speaker as well as a standard, non-directional speaker as recited in claim 2.

Claim 3 depends from claim 2 and further recites that the personal wireless communication device includes "a controller that controls which speaker or speakers to be used for the sound output." The Examiner relies on Meyer et al. for teaching of a switching mechanism, which performs a switching action based on whether an optional handset is attached to its holder. The switching in Meyer et al. is between a default hands-free mode and a secondary handset mode of operation. However, nothing in Johnson et al. or Meyer et al. teaches or suggests switching between a directional speaker and a non-directional speaker.

**PATENT**

Claim 4 depends from claim 3 and further recites that the personal wireless communication device includes "at least one sensor, and wherein said controller automatically controls which speaker or speakers to be used for sound output based on information provided by at least said sensor." The switching action in Meyer et al. relies on a handset sensing device 317 and a hang-up cup sensing device 319, and these sensors provide an indication as to whether an optional handset 127 is attached to a hang-up cup 129. See, Meyer et al., col. 8, lines 9-43. However, further to the deficiencies noted above, the sensing devices 317 and 319 are not part of a cellular speakerphone 100 in Meyer et al. but are instead part of an optional handset 127 and an associated hang-up cup 129. See, Meyer et al., Figs. 1 and 3. Hence, it is submitted that claim 4 is further distinguished from Johnson et al. and Meyer et al. in view of the recited sensor and its usage.

Claim 5 depends from claim 1 and further recites that "said personal wireless communication device is a hand-held communication device." Here, the Examiner asserts that "[i]t would have been obvious for one of ordinary skill in the art to implement [the] device of Johnson et al. with a handset." Applicants respectfully disagree. The methods disclosed in Johnson et al. are for use in a vehicle and the in-vehicle phone system 359 is fixed to the vehicle. Nothing suggests how these methods could in any way be used in, for example, a cellular speakerphone 100 of Meyer et al. Moreover, the techniques and systems of Johnson et al. would likely not be at all functional or useful for a hand-held communication device.

Claim 9 depends from claim 8, which depends from claim 1. Norris is unable to overcome the deficiencies of Johnson et al. noted above. Therefore, it is submitted that claim 9 is patentably distinct from Johnson et al. and Norris for at least the reasons noted above with respect to claim 1.

Claims 10-12 depend from claim 8, which depends from claim 1. American Technology Corp. is unable to overcome the deficiencies of Johnson et al. noted above. Therefore, it is submitted that claims 10-12 are patentably

**PATENT**

distinct from Johnson et al. and American Technology Corp. for at least the reasons noted above with respect to claim 1. Additionally, Applicants disagree that claim 12 recites an obvious design choice.

**REJECTION OF CLAIMS 13-15 UNDER 35 USC 103(a)**

On pages 8-10 of the Office Action, the Examiner rejected claims 13 (unclear as to claims 14 and 15) under 35 USC 103(a) as being unpatentable over Juntunen et al., U.S. Patent No. 6,163,711, in view of Takahashi et al., U.S. Patent No. 6,643,377, and rejected claims 14 and 15 under 35 USC 103(a) as being unpatentable over Juntunen et al. in view of Takahashi et al. and further in view of Brian (How Stuff Works – USB, Oct. 11, 2003). Applicants respectfully disagree.

Claim 13 pertains to a peripheral apparatus for an electronic device, where the electronic device is a personal wireless communication device. Further, the peripheral apparatus for the personal wireless communication device includes a directional speaker that provides ultrasonic sound output.

Juntunen et al. describes a hands-free adapter for interfacing a mobile phone handset with an existing audio system. With respect to Juntunen et al., for discussion purposes, suppose that the mobile phone handset 1 and the adapter 2 illustrated in Fig. 1 of Juntunen et al. respectively correspond to the personal wireless electronic device and the peripheral apparatus of claim 13. Then, the AM or FM radio 3 Juntunen et al. (e.g., home stereo system, portable stereo system or vehicle radio) cannot correspond to the peripheral apparatus as recited in claim 13. The AM or FM radio 3 is a separate system that can be used with the mobile phone handset 1 via the adapter 2. The AM or FM radio 3 is also not a peripheral to the mobile phone handset 1. Hence, Juntunen et al. does not teach or suggest a peripheral apparatus having a directional speaker that provides ultrasonic sound output.

**PATENT**

The Examiner also references an output plug 34 and a jack 35 of Juntunen et al. at Fig. 5 and col. 6, lines 59-64. However, as shown in Fig. 5 of Juntunen et al., the adapter 2 can provide an audio-out jack 35 for receiving a standard audio plug 34. Here, Juntunen et al. states "the adapter 2 may then be used with a number of cable devices to interface the audio signal from the mobile handset 1 to electronic equipment 36, such as a cassette player or CD player, that makes use of an audio system." However, the audio-out jack 35 is not a directional speaker; therefore, as previously noted, Juntunen et al. does not teach or suggest a peripheral apparatus having a directional speaker that provides ultrasonic sound output.

Moreover, on page 8 of the Office Action, the Examiner admits that Juntunen et al. does not teach a directional speaker that provides ultrasonic sound output. In view of the deficiencies of Juntunen et al., the Examiner further relied on Takahashi et al. Takahashi et al. describes an audio output apparatus for use in providing a television conference. None of the television 102, the set top box 106 or the speakers 102, 103 in Takahashi et al. are (or part of) personal wireless communication devices or peripheral devices therefore. Hence, it is submitted that Juntunen et al. in view of Takahashi et al. fails to teach or suggest the peripheral apparatus recited in claim 13. Also, claims 14 and 15 depend from claim 13 and are, therefore, patentably distinct from Juntunen et al. in view of Takahashi et al. for at least the same reasons.

**REJECTION OF CLAIMS 16-19 UNDER 35 USC 103(a)**

On pages 10-12 of the Office Action, the Examiner rejected claims 16-19 under 35 USC 103(a) as being unpatentable over McNelley et al., U.S. Patent No. 5,777,665, in view of Takahashi et al. Applicants respectfully disagree.

Claim 16 pertains to a peripheral device for a computing device. The peripheral device has a housing with a directional speaker. The directional speaker is configured to provide ultrasonic sound output in a predetermined direction, wherein the ultrasonic sound output by the directional speaker can

**PATENT**

result in audio sound in the predetermined direction for a user of said computing device. The peripheral device can also include "a port connector configured to assist with coupling said peripheral device to the computing device so that said computing device can drive said directional speaker to produce the audio sound."

In the Office Action, the Examiner points to Fig. 14 of McNelley et al. At Fig. 14, a beamsplitter 6 directs teleconferencing audio to a conferee. The audio sound is provided by a speaker 55, which can be "special directional speakers." Even so, McNelley et al. does not teach or suggest that the speaker 55 is "configured to provide ultrasonic sound output in a particular direction, wherein the ultrasonic sound output by said directional speaker results in audio sound in the particular direction for a user of said computing device" as is recited in claim 16. Also, the ports 18 and 19 illustrated in Fig. 6 of McNelley et al. are for the display 2, not the speaker 55 shown in Fig. 14.

In view of the deficiencies on McNelley et al., the Examiner further relied on Takahashi et al. Takahashi et al. describes an audio output apparatus for use in providing a television conference. None of the television 102, the set top box 106 or the speakers 102, 103 in Takahashi et al. are (or part of) a peripheral apparatus for an electronic device.

Therefore, it is submitted that McNelley et al. in view of Takahashi et al. fail to teach or suggest the peripheral apparatus recited in claim 16. Also, claims 17-19 and 21 depend from claim 16 and are, therefore, patentably distinct from McNelley et al. in view of Takahashi et al. for at least the same reasons.

**REJECTION OF CLAIM 20 and 21 UNDER 35 USC 103(a)**

On pages 12-13 of the Office Action, the Examiner rejected claims 20 and 21 under 35 USC 103(a) as being unpatentable over McNelley et al. in view of Takahashi et al. and further in view of Brian (How Stuff Works – USB, Oct. 11, 2002). Applicants respectfully disagree. Claims 20 and 21 depend from claim 16. Brian, even if combined with McNelley et al., fails to overcome the

**PATENT**

deficiencies of McNelley et al. and Takahashi et al. noted above. Hence, for at least the same reasons noted above, it is submitted that claims 20 and 21 are also patentably distinct from McNelley et al. in view of Takahashi et al. and/or Brian.

**REJECTION OF CLAIMS 22-25 UNDER 35 USC 102(b)**

On pages 13-15 of the Office Action, the Examiner rejected claims 22-25 under 35 USC 103(a) as being unpatentable over Breed et al., U.S. Patent Pub. No. 2001/0038698, in view of Johnson et al. Applicants respectfully disagree.

Claim 22 pertains to a method for automatically selecting one of a plurality of potential speakers associated with an audio output device, where some of the speakers are directional while other of the speakers are non-directional. Among other things, claim 22 recites: "obtaining a piece of information pertaining to the audio output device" and "determining .... whether the appropriate one or more of the potential speakers are to be directional, non-directional or both based on the piece of information." In contrast, in Breed et al. the speakers are directional (i.e., ultrasonic) and there is no selection between directional and/or non-directional speakers based on a piece of information as recited in claim 22.

The Examiner agrees that Breed et al. fails to teach use of direction and non-directional speaker or a method to control which speakers are in use. In view of the deficiencies of Breed et al., the Examiner again makes reference to col. 29, lines 19-35 of Johnson et al. However, there is nothing in column 29, lines 19-35 of Johnson et al. that teaches or suggests anything to overcome the deficiencies of Breed et al.. In Johnson et al. there is no teaching to provide both direction and non-directional speakers whether in or out of a vehicle. There is a merely casual reference to possible use of directional speakers at col. 29, lines 33-35 and a reference to a speaker 357 at col. 29, lines 41-42. Clearly, Johnson et al. offers no teaching or suggestion for use of both a directional speaker and a non-directional speaker together in a vehicle. Even, for the sake of discussion, assuming that directional and non-directional speakers were to be used together,



**PATENT**

there is no teaching or suggestion for any means or need to "determining .... whether the appropriate one or more of the potential speakers are to be directional, non-directional or both based on the piece of information." as recited in claim 22.

Therefore, it is submitted that Breed et al. in view of Johnson et al. fails to teach or suggest not only use of both directional and non-directional speakers but also the speaker selection by the peripheral apparatus as recited in claim 22. Also, claims 23-25 depend from claim 22 and are, therefore, patentably distinct from Breed et al. and Johnson et al. for at least the same reasons. Additionally, as to dependent claims 23-25 these claims recite additional limitations that are not taught or suggested by Breed et al. or Johnson et al. These references offer no teaching or suggestion for using of multiple speakers (direction/non-directional) and determining which to utilize.

**SUMMARY**

It is submitted that claims 1-25 are patentably distinct from the cited references. Reconsideration of the application and an early Notice of Allowance are earnestly solicited.

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,



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